

# **MAG Commuter Rail Strategic Plan**

**Management Committee**

**April 9, 2008**

# Requested Actions

- **Recommend acceptance of the Commuter Rail Strategic Plan to the Transportation Policy Committee**
- **Recommend that MAG to proceed with the first four implementation steps identified on page nine of the Executive Summary:**
  1. On-going Coordination
  2. Union Pacific Passenger Rail Coordination
  3. Burlington Northern Santa Fe Railway Coordination
  4. Regional Transit Planning

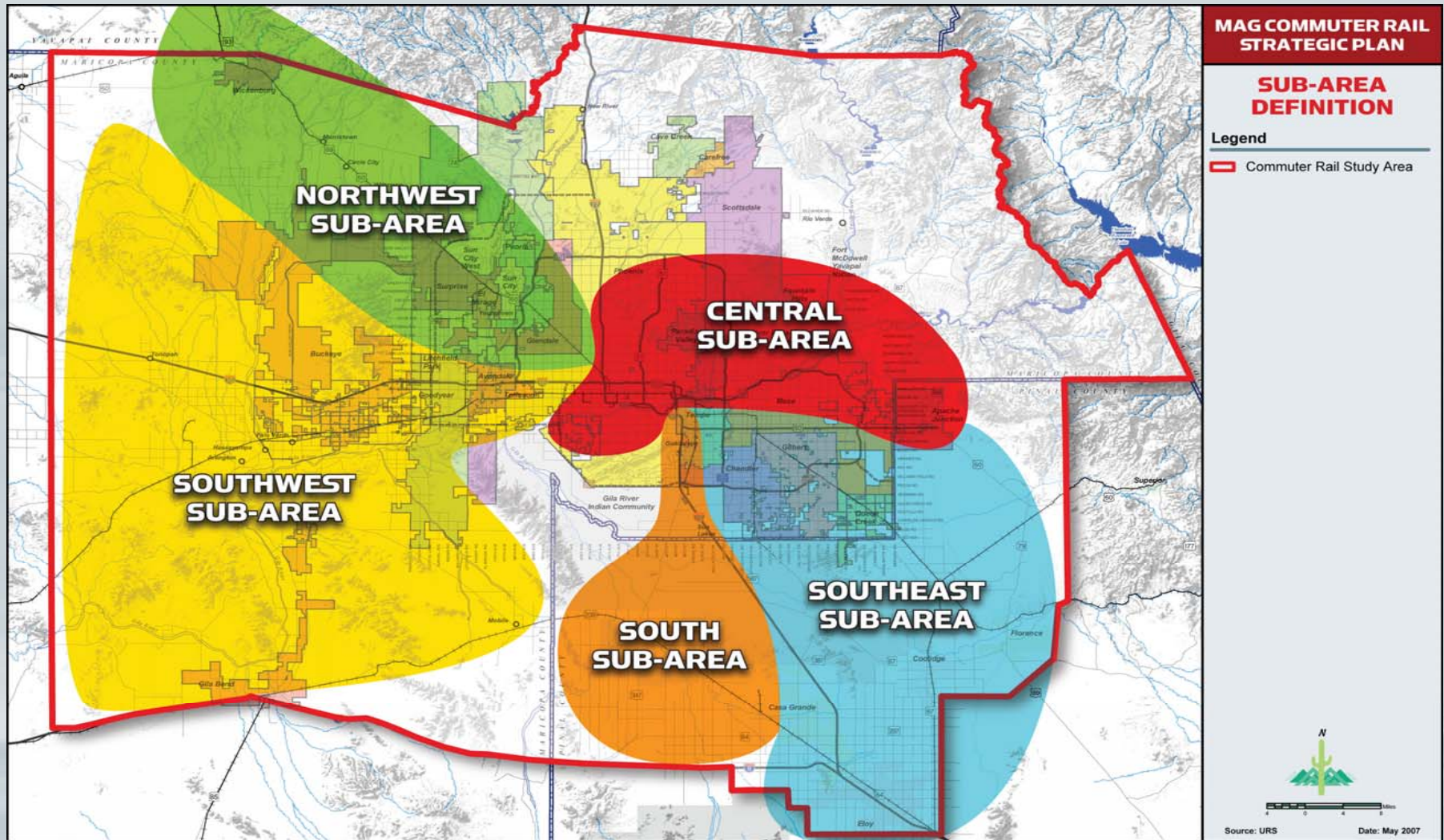
# Project Purpose Statement

To develop an implementation strategy for commuter rail service in Maricopa County and northern Pinal County.





# Project Study Area



# Public/Agency Involvement

- Four Commuter Rail Stakeholder meetings
- Project briefings to the Management Committee, Transportation Policy Committee, and Regional Council
- Project briefings to chamber associations, citizen committees, and the Legislature's Blue Ribbon Panel on Transportation
- Public meeting on March 6, 2008 to receive comments on the draft strategic plan
- Transportation Review Committee accepted plan on March 27, 2008

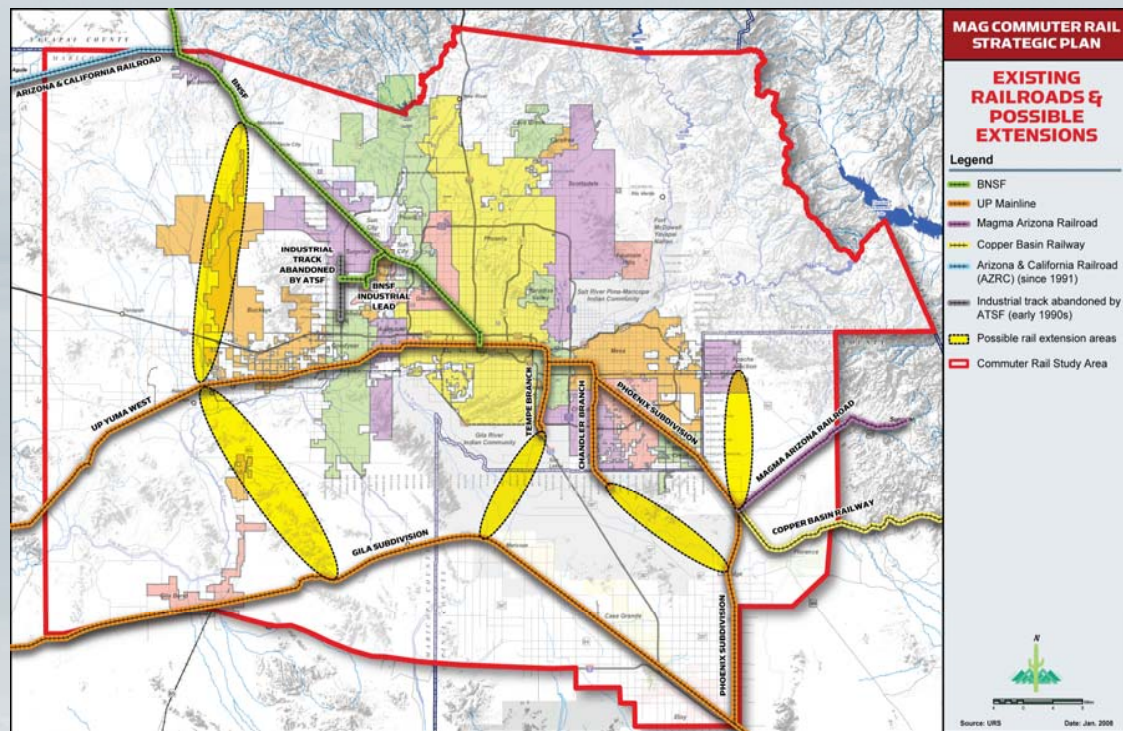
# Implementation Framework

- **Identify policy issues and process to implement commuter rail, not technical details**
  - **Concept System Plan**
  - **Implementation Requirements**
  - **Implementation Steps**



# Concept System Plan

- Utilize existing freight lines:
  - BNSF/Grand Avenue
  - UP Mainline/Southeast
  - UP Mainline/Chandler
  - UP Mainline/Tempe
  - UP Mainline Yuma/West
- Include alignments in developing areas:
  - Tempe Branch to Maricopa
  - Chandler Branch to Coolidge
  - Hassayampa/Hidden
  - Superstition Vistas



# Implementation Requirements

- **Governance and Administration**
  - Policy, Construction and Operations
  - Roles and Responsibilities
- **Railroad Cooperation**
  - Purchase or Capacity Rights Agreements
- **Funding and Finance**
  - Sources and Uses
  - Regional Priorities





# Implementation Scenario

## Get Started

Definition	Example
Single Corridor	Northstar – MN; 40 miles from downtown Minneapolis northwest to Big Lake along Highway 10
One railroad agreement; ROW lease or purchase	Leased track rights from BNSF for 5 trains per peak period
Lower cost with shared track/facilities (up to \$400M)	Improved track for railroad; added stations, purchased locomotive trains and bi-level cars
Simple approach to governance in corridor	Joint Powers Authority with Anoka County and State

# Implementation Scenario

## Starter System

Definition	Example
More than one Corridor	Salt Lake City; from downtown north 44 miles to Ogden and south 45 miles to Provo
Could be more than one railroad agreement; ROW lease or purchase	Purchased 120 miles from UPRR; leasing some joint operating rights
Moderate cost with single track and/or shared track and facilities (\$400 - \$800M)	Rebuilt tracks for service, added stations, purchasing locomotive trains and bi-level cars
More complex approach to governance with multiple jurisdictions	One overall authority as UTA; requires participation by all jurisdictions in 3 county region

# Implementation Scenario

## Regional System

Definition	Example
Implement in multiple Corridors at same time	Denver FasTracks; 41 miles Denver to Boulder/Longmont, 18 miles North Metro, 38 miles Airport/Gold
Complex system would require separate facilities ROW lease or purchase	Separate negotiations with UPRR and BNSF for purchase and lease of numerous properties
Most costly with separate track/facilities; some lines could share tracks (\$800M - \$2B)	Separate freight tracks for North Metro and Airport/Gold; Freight shared with Northwest
Complex governance; would require regional agreements	One overall authority as RTD; requires participation by all jurisdictions in 7 county region



# Implementation Steps

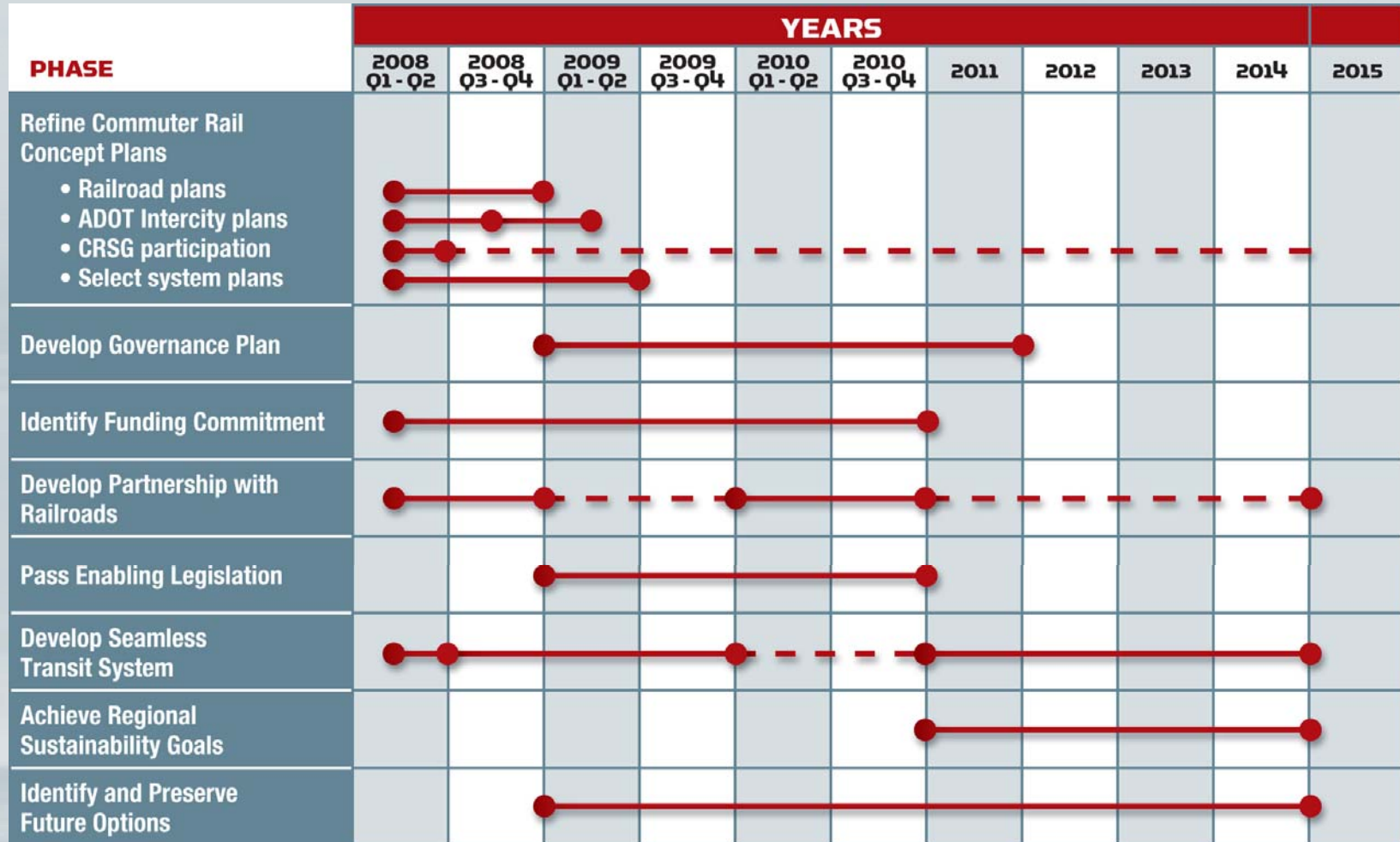
**Twelve steps for implementing commuter rail in the study area were developed**

- **Steps identify responsible parties, partners, and timeframes**

**Implementation steps were developed utilizing:**

- **CRSG Goals and Objectives**
- **CRSG SWOT Analysis**
- **CRSG Action Plans**

# Implementation Step-Schedule



# Requested Actions

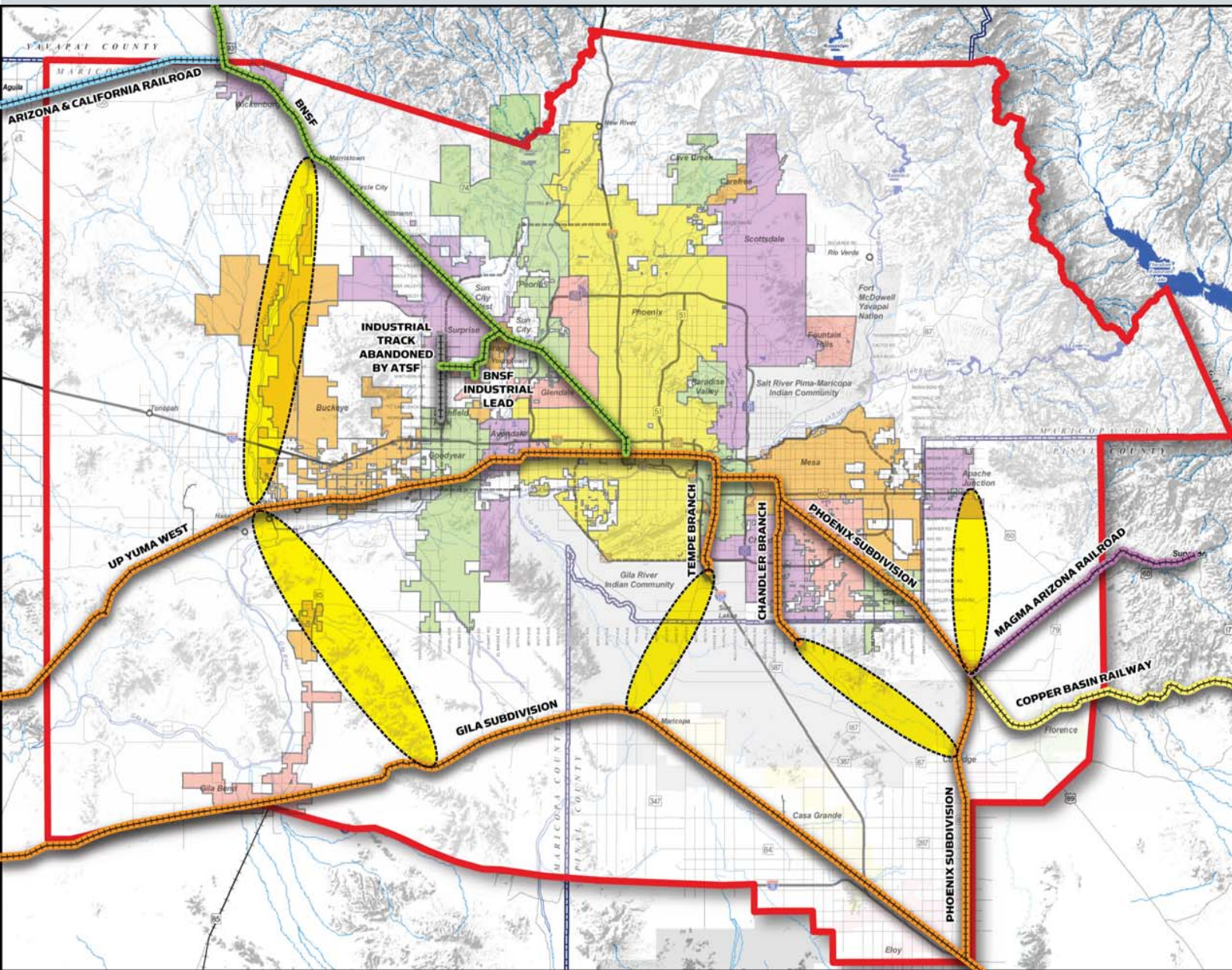
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## MAG COMMUTER RAIL STRATEGIC PLAN

### EXISTING RAILROADS & POSSIBLE EXTENSIONS

- Legend**
- BNSF
  - UP Mainline
  - Magma Arizona Railroad
  - Copper Basin Railway
  - Arizona & California Railroad (AZRC) (since 1991)
  - Industrial track abandoned by ATSF (early 1990s)
  - Possible rail extension areas
  - Commuter Rail Study Area



Source: URS Date: Jan. 2008



# 3. BNSF Passenger Rail Planning and Coordination

## Corridor development plan for the BNSF Railway/Grand Avenue corridor

- Action required to advance the next phase of commuter rail planning by MAG, per FY 2008 UPWP.
- Does not identify corridor as the region's top priority.
- In conjunction with ADOT coordination with Union Pacific, this study would keep both railroads engaged in the dialogue.
- Consistent with ADOT's recent planning grant application to study passenger service between Peoria/Surprise/Phoenix and Tucson.
- BNSF has expressed interest in discussing opportunities for an integrated freight/passenger corridor.



# 1) On-Going Coordination

- Coordination with freight railroads.
- Coordination with ADOT for intercity passenger service.
- On-going stakeholder involvement.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
MAG CAAG ADOT	BNSF UP METRO RPTA Local Jurisdictions	On-going

## 2) UP Passenger Rail Coordination and Planning

- Continue coordination between ADOT and UP.
- Develop corridor specific recommendations for intercity passenger rail service (ADOT High Speed Passenger Rail Strategic Plan).
- After ADOT selects a preferred route for Phoenix to Tucson passenger rail service, identify opportunities for additional regional commuter rail service along UP corridors in the study area.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
ADOT	MAG CAAG PAG METRO RPTA Local Jurisdictions	2008-2009

# 3) BNSF Passenger Rail Coordination and Planning

- Continue coordination between ADOT and BNSF Railway.
- Develop corridor specific recommendations for the BNSF/Grand Avenue Corridor and provide necessary details for implementation.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
MAG	BNSF ADOT METRO RPTA Local Jurisdictions	2008-2009

## 4) Regional Transit Planning

- Develop corridor specific recommendations and provide necessary details for implementation (e.g., MAG Transit Framework Study, Pinal County Transit Feasibility Review, ADOT High Speed Rail Strategic Plan).

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
MAG ADOT Pinal County	Local Jurisdictions RPTA METRO	2008-2009



## 5) Future Corridor Development Plans

- Applicable to the following corridors: UP Sunset Corridor, UP Phoenix Subdivision, Chandler Branch, Tempe Industrial Lead, UP-Yuma/West, Copper Basin Railway, Magma Arizona Railroad, and possible extensions.
- Pending recommendations from current planning studies (e.g., ADOT High Speed Rail Strategic Plan, METRO Tempe South AA, etc.) develop corridor specific recommendations and provide necessary details for implementation.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
MAG CAAG	BNSF UP ADOT METRO RPTA Copper Basin Railway Magma Arizona Railroad	2009-2012

## 6) Identify Funding Source Commitment

- Define new revenue streams that would be dedicated to development and ongoing operation of the commuter rail system. At the same time it is important to recognize the strong preference to avoid disrupting current programmed projects and funding among the agencies.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
MAG CAAG ADOT Legislature	Local Jurisdictions	2008-2010

## 7) Develop Governance Plan

- Agencies should work together to plan and implement a regional commuter rail system. The transportation agencies should agree to implement and administer the commuter rail system by one of a variety of means including:
  - A new Passenger Rail Authority (PRA);
  - Designation of one of the agencies as the Passenger Rail Authority; or
  - Establishment of a new Joint Powers Authority (JPA).

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
MAG CAAG ADOT RPTA METRO	Local Jurisdictions	2009-2011

## 8) Develop Partnerships with Railroads

- Develop a public/ private Memorandum of Understanding followed by detailed agreements with freight railroad companies to define funding and to implement commuter rail facilities and services that will mutually benefit the public and private sector interests.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
Passenger Rail Authority or Joint Powers Authority	BNSF UP Rail Authority Elected Officials Tribal Communities	2009-2011



## 9) Pass Enabling Legislation

- Work to pass enabling legislation relative to liability and indemnification to facilitate commuter rail operations in freight rail corridors.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
Passenger Rail Authority or Joint Powers Authority	RPTA METRO ADOT	2010-2011

# 10) Develop Seamless Transit System

- Coordinate joint planning and operations to develop a seamless system of transit services throughout the study area.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
Passenger Rail Authority or Joint Powers Authority	RPTA METRO ADOT Existing Transit Providers County Governments Tribal Communities Railroads Major Land Owners Business Community	2010-2015

# 11) Achieve Regional Sustainability Goals

- Develop the commuter rail system to reinforce and achieve regional sustainability goals and plans relative to energy and the environment. This will include attention to environmental requirements, land use plans and opportunities, and joint project development.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
Passenger Rail Authority or Joint Powers Authority	MAG CAAG ADOT Railroad Maricopa County Pinal County Local Jurisdictions	2010-2015

# 12) Identify and Preserve Future Options

- Use planning studies to identify and preserve rights-of-way in developing and underdeveloped areas for multimodal transportation corridors to include roadway and rail transit.

RESPONSIBLE PARTY	PARTNERS	TIME FRAME
Passenger Rail Authority or Joint Powers Authority	MAG CAAG ADOT Railroad Maricopa County Pinal County Local Jurisdictions	2010-2015



# Peer System Comparisons

System	Length (Miles)	Cost/ Mile	Peak Trains	Railroad	Admin - Gov	Funding
Front Runner Salt Lake City	Ogden – 44 Provo – 45	\$ 10 M TBD	6/2 6/2	UP – Bought ROW	UTA – Transit Agency	Local, Regional, Federal
Rail Runner Albuquerque	Belen to Bernalillo – 48 Santa Fe – 50	\$ 4 M \$ 6 M	3/3	BNSF – Bought ROW	NMDOT – State	State
Northstar Minneapolis	Big Lake – 40	\$ 8 M	5/1	BNSF – Lease track	MnDOT – State	Local, State, Federal
FasTracks Denver	Northwest – 41 North Metro – 20	\$14 M \$30 M	8/8 8/8	BN – Lease UP – Buy ROW	RTD – Transit Agency	Local, Regional, Federal
Washington County, Portland	Washington County – 15	\$ 8 M	5/1	BN – Bought ROW	Tri-Met Transit Agency	Regional, Federal

# Requested Action

## 2. Recommend that MAG proceed with a commuter rail corridor development plan for the BNSF Railway/Grand Avenue Corridor

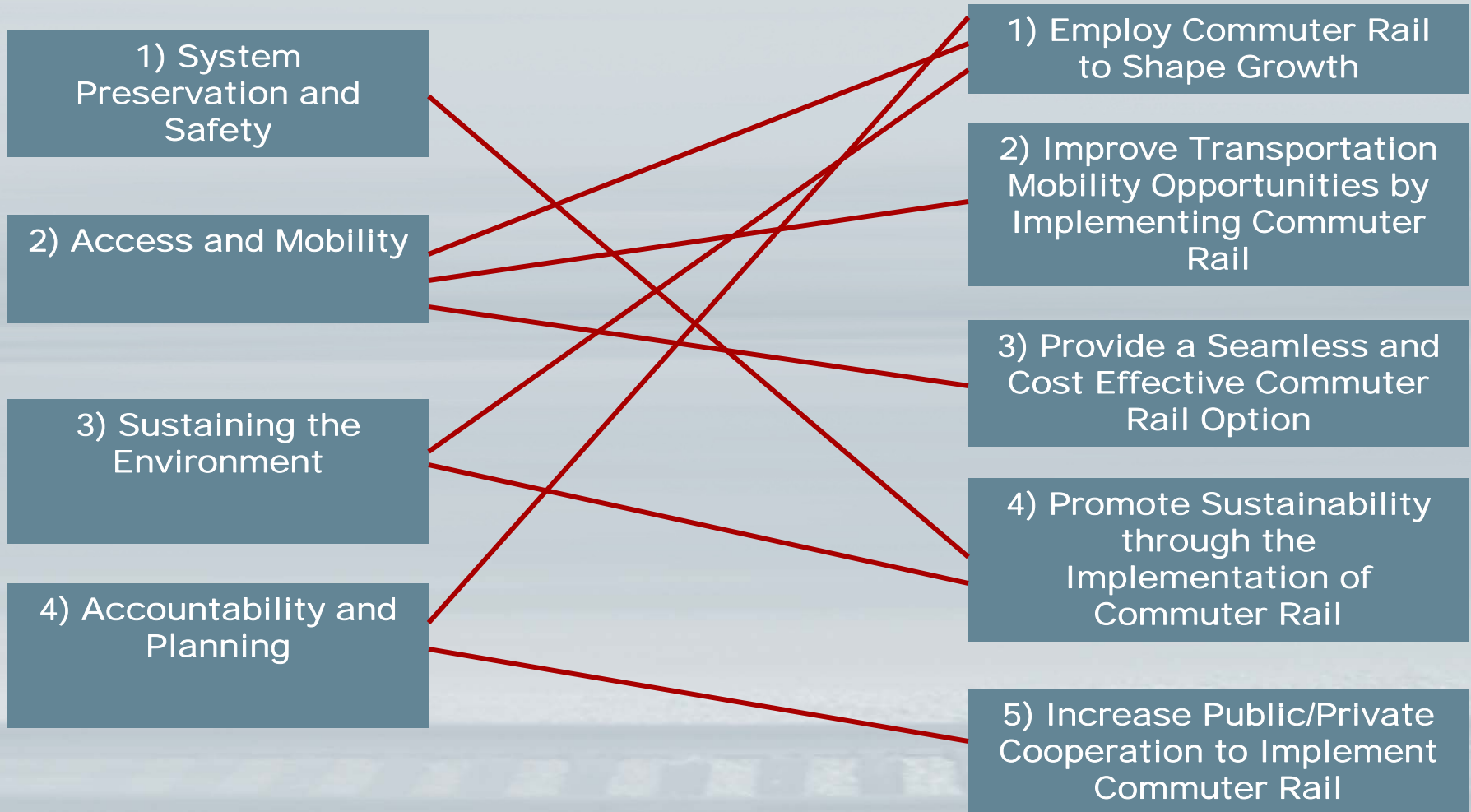
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# Strategic Plan Development Process – CRSG #3

Goal	Action Item	Owner	Time
1. Employ CR to shape growth	Stimulate economic development	Development community	10 to 15 years
2. Improve mobility options with CR	Provide reliable and integrated alternative	Partnership; MAG, ADOT	Start now
3. Provide seamless and cost-effective option	Identify and preserve ROW; Conduct further study of funding	Governments	Now
4. Promote sustainability	Assess Air Quality w/ and w/out CR	ADOT, MAG, Cities	18 months
5. Increase public/private cooperation	Establish formal agreements	MAG and Northern Pinal County	Now

# RTP Goals

# CRSG Goals





# **Strategic Plan Development Process – CRSG #2**

- **Results of SWOT Process:**
  - **Were able to organize into six “high priority” factors**
    - **Regional Growth**
    - **Multimodal Opportunities**
    - **Existing Land Use and ROW**
    - **Cost and Affordability**
    - **Sustainability**
    - **Public and Private Cooperation**
  - **Found few differences across Sub-areas**

# Overall Vision

- Convene stakeholders from around the region to define requirements
- Develop consensus for Commuter Rail in Regional Transportation Plan
  - Role in region travel market
  - Define requirements for successful system implementation



# Service Area



## LIGHT RAIL



**STATION SPACING:** 1/2 TO 1 MILE      **SYSTEM EXTENT:** 15 TO 20 MILES  
**MAXIMUM SPEED:** 65 MPH      **AVERAGE SPEED (WITH STOPS):** 25 MPH



## COMMUTER RAIL



**STATION SPACING:** 2 TO 4 MILES      **SYSTEM EXTENT:** 20 TO 75 MILES  
**MAXIMUM SPEED:** 79 MPH      **AVERAGE SPEED (WITH STOPS):** 45 MPH



## INTERCITY RAIL



**STATION SPACING:** 20 TO 30 MILES      **SYSTEM EXTENT:** 50 TO 300 MILES  
**MAXIMUM SPEED:** 110 MPH      **AVERAGE SPEED (WITH STOPS):** 55 MPH

# Commuter Rail is more efficient for longer trips

To carry 300-400 passengers requires.....



10 buses = 10 operators



3 locomotive-hauled bi-level coaches+locomotive = 1 operator

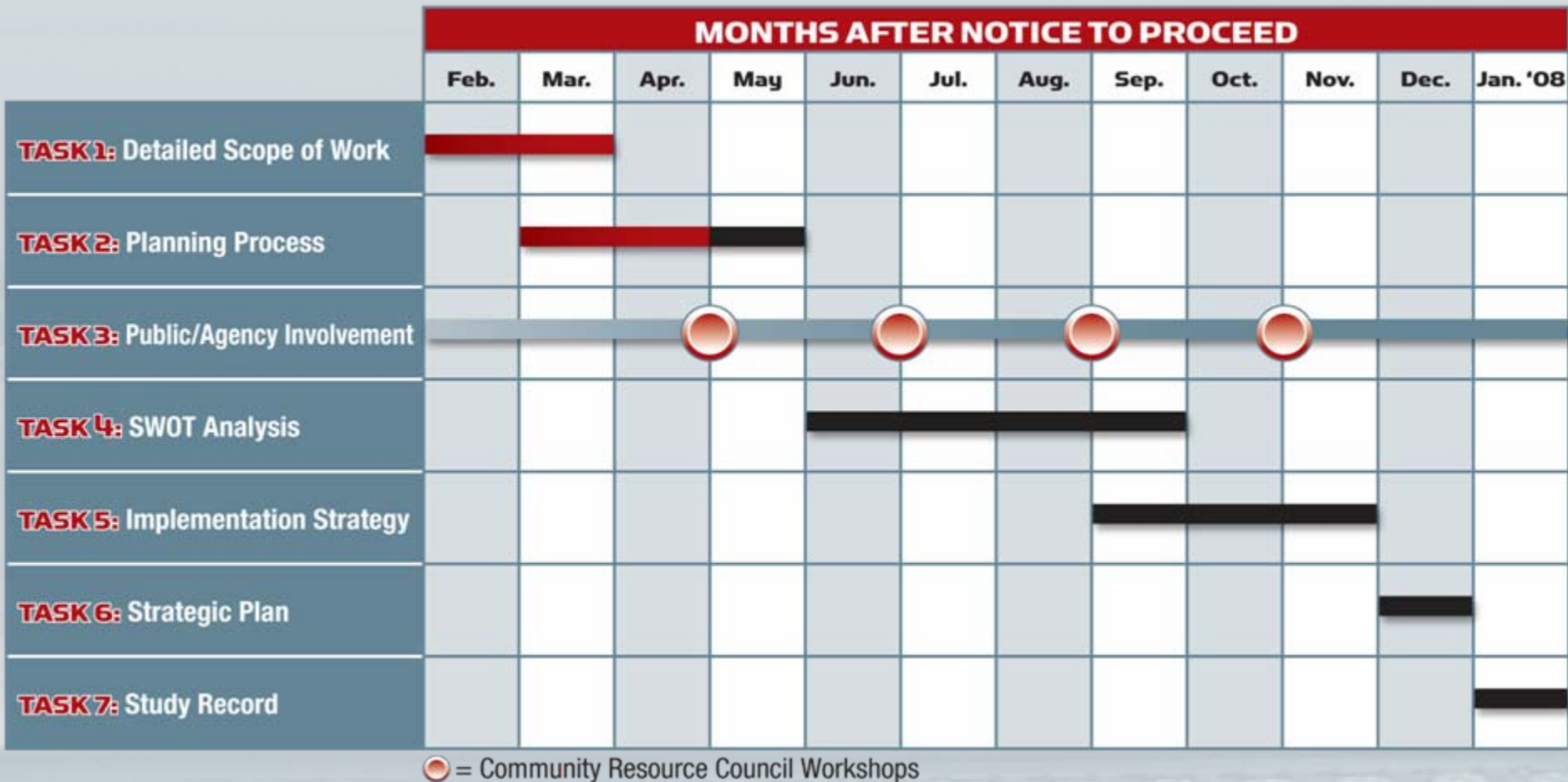


4 single-level DMUs = 1 operator

**Note: Labor cost is the largest part of daily operating costs.**



# Schedule



# **Strategic Plan Development Process – CRSG #3**

- **Development of Action Plans**
  - Action Plans developed to support Goals
  - Action Plans defined to include Action, Owner, Partners and Timeframe
  - High Priority Action Plans identified

# Implementation Steps

1. On-Going Coordination
2. UP Passenger Rail Coordination and Planning
3. BNSF Railway Passenger Rail Coordination and Planning
4. Regional Transit Planning
5. Future Corridor Development Plans
6. Identify Funding Source Commitment

# Implementation Steps

- 7. Develop Governance Plan**
- 8. Develop Partnerships With Railroads**
- 9. Pass Enabling Legislation**
- 10. Develop Seamless Transit System**
- 11. Achieve Regional Sustainability Goals**
- 12. Identify and Preserve Future Options**